Note on the Tachinidæ*:* by FRANCIS WALKER.

Among the Diptera the proceedings of this tribe, each of which passes the whole of its existence, except the latter end, in another living insect, are more interesting than the habits of most other tribes, and a notice of their history, which is comparatively simple and limited, may suitably precede the history of the parasitic Hymenoptera, which is very extensive, and complicated, and difficult to understand. In the Northern Hemisphere their habitation may be divided into three principal regions, in each of which they have passed to and fro; America, Africa, and part of Europe, and Asia including the rest of Europe, and this last region should be especially studied as it includes the British Isles. A survey of the country may give some indications of the track in their flittings and migrations, swift or slow, according to the helps or hindrances which occurred to them. These indications only refer to the last advance through Asia to Europe; darkness hides all knowledge of their earlier transition, and the darkness doubles each time in the endeavour to retrace their preceding passages to and fro, as the change of climate impelled them. After the last glacial epoch twilight reveals part of their course and fancy may represent the rest. They may be believed to have ascended from the tropical regions in south-eastern Asia to northern Asia and thence to Europe and to have established stations; in these some kinds wholly stopped, others stopped in part and proceeded in part, and others wholly proceeded, and thus the geographical distribution was effected. The Diptera in general by their facility of flitting, and of quick increase, and of appropriating various states of plants and animals are likely to be comparatively the first insect population in a country which begins to afford means for subsistence. But the flies here mentioned are in circumstances very different from those of the Muscidæ to which they are nearly allied; their progress and prosperity depends on that of other insects, chiefly Lepidoptera, which are their sustainers, or in whose early state their early state has a hidden existence. Their migration therefore could not have preceded, and most probably succeeded that of the Lepidoptera. The opinions lately published that the character of an insect is modified or established by the particular kind of insect in which it lives may be useful as leading to more investigation of the parasitic flies here noticed. Is each kind of Tachinid generally constant in its parasitism to one kind of Lepidoptera, and if it infects two or more kinds are there two or more races, and are successive generations of one race constant to one Lepidopterous kind for sustenance? If there be a transition from one kind of maintenance to another does the change modify the characters, and does the modification, as has been asserted, become cumulative. Is its instinct in choosing a habitation for its successors derived from its having had the same kind of habitation, and supposing that it can have no access to this habitation, is another dwelling place to which its instinct leads it similar to that which one of its earlier ancestors inhabited, and will its descendants follow its example and select, if opportunity should occur, for the next generation the kind of home in which they were maintained, or, in other words, what are the manifestations of "the law of inheritance" as it is termed? It is well known that the species of this tribe are very numerous and that many of them rarely occur, and that the parasitism of most of them is unknown. In the following list the names of some European Tachinidæ and those of their feeders are placed side by side. It will be seen that by far the greater part feed on Lepidoptera, but some kinds are parasites of Coleoptera and Hymenoptera or of other Diptera, and one kind is said to destroy Plusia gamma and Procrustes coriaceus.

Ocyptera bicolor, *Oliv.* - -	Pentatoma grisea.
Echinomyia grossa, *L.* - -	Lasiocampa Trifolii.
„ fera, *L.* - - -	Lithosia quadra, Arctia aulica, Lymantria monacha, and Trachea piniperda.
Gymnochæta, viridis, *Fall.* -	Miana arcuosa.
Plagia trepida, *Meig.* - - -	Lophyrus Pini.
Gonia flaviceps, *Zett.* - - -	Hadena glauca.
Nemoræea glabrata, *Meig.* -	Trachea piniperda.
„ rudis, *Fall.* - -	„ „

Nemoræea xanthogastra, *Rond.*	Sphinx Ligustri.
„ analis, *Macq.*	Cucullia Verbasci.
„ quadripustulata, *Fab.*	Sphinx Ligustri, Saturnia Carpini, Cucullia Verbasi.
Epicampocera succincta, *Meig.*	Saturnia Carpini.
Exorista vulgaris, *Fall.*	Plusia gamma, Procrustes coriaceus.
„ nemestrina, *Meig.*	Clavellaria Amerinæ.
„ lucorum, *Meig.*	Arctia caja, A. villica, A. Hebe, Phragmatobia fuliginosa, Stilpnotia salicis. Hypogymna dispar, and Endromis versicolora.
„ cheloniæ, *Rond.*	Arctia caja.
„ libatrix, *Panz.*	Clisiocampa neustria, Brepha notha, and Abrostola asclepiadis.
„ apicalis, *Macq.*	Saturnia Carpini.
„ affinis, *Fall.*	Arctia caja, and Saturnia Carpini.
„ sanguinolenta, *Macq.*	Cerura vinula.
„ gibbicornis, *Macq.*	Odonestis potatoria.
„ inclinata, *Macq.*	Vanessa polychloros.
„ Acronyctarum, *Macq.*	Acronycta Psi.
„ Orgyæ, *Desv.*	Dasychira pudibunda.
„ acronita, *Desv.*	Acronycta megacephala.
„ cuculliæ, *Desv.*	Cucullia lychnitis.
„ Arion, *Desv.*	Dasychira pudibunda, Orgyia antiqua.
„ bombycivora, *Desv.*	Endromis versicolora.
„ grandis, *Zett.*	Arctia caja, Saturnia Carpini.
„ pavonise, *Zett.*	Saturnia Carpini.
Meigenia bisignata, *Meig.*	Gymnancyla canella, Athalia pinarum, Paropsis sexpunctata.
Tachina rustica, *Meig.*	Vanessa polychloros, Stilpnotia Salicis, Lasiocampa Quercus, and Clisiocampa neustria.
„ doris, *Meig.*	Pyrameis Cardui.
„ agilis, *Meig.*	Vanessa Io.
„ morosa, *Meig.*	Acherontia atropos.
„ bella, *Meig.*	Vanessa Io, Hypogymna dispar.

Tachina nitidula, *Meig.*	Saperda populnea.
„ processionea, *Ratz.*	Cnethocampa processionea.
„ iliaca, *Ratz.*	„ „
„ ochracea, *Ratz.*	„ „
„ similaris, *Ratz.*	Tenthredo variegata.
„ janitrix, *Ratz.*	Tenthredo frutetorum.
„ pinivora, *Ratz.*	Hypogymna dispar.
„ larvincola, *Ratz.*	„ „
„ monacha, *Ratz.*	„ „
„ neustriæ, *Ratz.*	Clisiocampa neustria.
„ Hartigii, *Ratz.*	„ „
„ evonymella, *Ratz.*	Hyponomeuta evonymella.
„ gilva, *Hart.*	Lophyrus pallidus.
„ inclusa, *Hart.*	„ „
„ bimaculata, *Hart.*	„ „
„ piniariæ, *Hart.*	Bupalus piniarius.
„ erythrostoma, *Hart.*	Sphinx Pinastri.
„ inflexa, *Bouché*	Tenthredo grossulariæ.
Masicera flavoscutellata, *Zett.*	Lophyrus.
„ pratensis, *Meig.*	Smerinthus Populi, Odonestis potatoria, and Saturnia Pyri.
„ sylvatica, *Fall.*	Saturnia Spini and S. Pyri.
Phorocera concinnata, *Meig.*	Pieris Brassicæ, Sphinx Pinastri, Euproctis chrysorrhea, and Stilpnotia Salicis.
„ assimilis, *Fall.*	Vanessa prorsa, Saturnia Carpini.
„ munda, *Meig.*	Pieris Brassicæ.
„ lata, *Zett.*	Lophyrus Pini.
„ ortalidis, *Desv.*	Ortalis stabilis.
„ orgyiæ, *Desv.*	Dasychira peudibunda.
„ cuculliæ, *Desv.*	Cucullia Verbasci.
„ Bercei, *Desv.*	Eriogaster processionica.
„ pusilla, *Desv.*	Pieris Rapæ.
„ Lamberti, *Desv.*	Chrysomela graminis.
Baumhaueria vertiginosa, *Meig.*	Arctia caja and A. villica.
Frontina austera, *Meig.*	Carabus violaceus, C. cancellatus, and C. gemmatus.
Metopia forficulæ, *Newm.*	Forficula auricularia.

Leskia aurea, *Fall.*	Ægeria ichneumoniformis and Æ. cynipiformis.
Thryptocera setipennis, *Fall.*	Forficula auricularia.
„ pilipennis, *Fall.*	Retinia buoliana, R. resinana, Hyponomeuta evonymella, and H. liturella.
„ bicolor, *Zett.*	Lasiocampa Quercus and Scardia mediella.
„ spinipennis, *Meig.*	Trachea piniperda.
Thelaira leucozona, *Panz.*	Arctia caja and Spilosoma lubricepeda.